BC's Opioid Crisis
Physio Can Help with non-pharmacological management of pain

April 2017

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Executive Summary

- Total spending on drugs in British Columbia by both public and private sectors in 2016 was estimated at $3.8 billion.¹
- From 1991 to 2015, total spending on drugs in BC rose from $809.7 million to more than $3.6 billion – an increase of 344.6 per cent.
- By comparison, British Columbia’s economy, as measured by nominal gross domestic product (GDP), rose by only 198.4 per cent over the same period.
- Private sector expenditures represented 69.7 per cent of total drug spending in 2016, while public sector outlays composed 30.3 per cent of the total.²
- Private sector spending on drugs has been rising faster in recent years than public sector expenditures.³
- From 1991 to 2016, private sector expenditures grew from $507.3 million to nearly $2.7 billion – an increase of 432.2 per cent.
- Over the same period, public sector outlays on drugs increased from $302.4 million to slightly less than $1.2 billion – an increase of 297.8 per cent.
- In 2016, spending on drugs by individuals accounted for 30.0 per cent of all private sector healthcare expenditures. That number is up from 28.4 per cent in 2001, and 23.5 per cent in 1991.⁴
- Most public sector spending on drugs in BC comes from the Province of British Columbia. In 2016, it was estimated that they spent a total of slightly more than $1 billion on drugs.⁵

TABLE 01
Total Spending on Drugs (Public and Private) in BC, 1991 to 2016 ($millions)

<table>
<thead>
<tr>
<th>Year</th>
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<tr>
<td>1991</td>
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<tr>
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(Source: Canadian Institute for Health Information National Health Expenditure Trends, 1975 to 2016)
• The majority of provincial government spending on drugs is through the PharmaCare program. Between 2001/02 and 2015/16, PharmaCare expenditures increased from $717 million to more than $1.3 billion. 

• Polypharmacy refers to an individual taking a number of prescribed drugs at the same time. In 2012, two-thirds of seniors on a public pharmaceutical program were using five or more drugs, while more than one-quarter of seniors were on 10 or more drugs.

• Seniors as a group are over-prescribed and some individuals are vulnerable to adverse effects.

• Studies have found that many hospitalizations of the elderly are a consequence of multiple prescriptions, or falls caused by over-medication.

• Chronic pain – which is physical pain that lasts for three months or longer – affects nearly one in every five Canadians.

• Older adults have a greater prevalence of chronic pain, and women at older ages have the highest prevalence. About half of those suffering from chronic pain have endured it for more than a decade.

• Prescription opioids are medications (psychoactive substances, or drugs) used to treat acute and chronic pain. They also can induce a sense of euphoria.

• On a per capita basis, Canada, according to a United Nations report published in 2012, is the world’s second largest consumer of narcotic drugs.

• The New England Journal of Medicine reported in March 2016 that “two major facts” concerning chronic pain and opioid abuse “can no longer be questioned.” First, “opioid analgesics are widely diverted and improperly used.” Second, “the widespread use of the drugs has resulted in a national epidemic [in the United States] of opioid overdose deaths and addictions.”

• On April 14, 2016, British Columbia’s Provincial Health Officer declared a public health emergency to address a sharp increase in drug related overdoses and deaths. From 2007 to 2016, annual illicit overdose deaths in BC rose from 202 to 922.

• Physiotherapy is proven as a useful adjunct to prescription opioids in the treatment of pain. At a time when British Columbians are searching for answers to the province’s drug opioid crisis, Physio Can Help.
TABLE 02
Prevalence of chronic pain, Canada 2007 to 2008, by region
(Survey of 4,000 respondents age 18 years and older)

(Source: Donald Schopflocher, Paul Taenzer and Roman Jovey, Prevalence of chronic pain in Canada,’ in Pain Resource and Management, November/December 2011)

TABLE 03

(Source: Ministry of Public Safety and Solicitor General, Office of the Chief Coroner, Illicit Drug Overdose Deaths in BC. February 2017)
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Introduction

Prompted by an alarming spike in drug related overdoses and deaths across every region of the province, British Columbia’s Provincial Health Officer on April 14, 2016 declared a public health emergency. It was an historic event, marking the first time the Provincial Health Officer has ever exercised the emergency powers granted under the Public Health Act.

BC also became the first province in Canada to take such dramatic action in addressing the opioid crisis now sweeping the country.¹

A decade ago, in 2007, the number of illicit drug overdose deaths in BC was 202. By 2015, that number had more than doubled to 513, and then in 2016 it nearly doubled again, to 922.²

Prescription opioids are one of three categories of psychoactive pharmaceuticals (drugs) used by medical professionals to treat patients who suffer from acute or chronic pain. These drugs, however, are often abused or misused.

According to a survey published by Health Canada in 2014, 6.3 per cent of people age 15 years and older who had used a psychoactive pharmaceutical in the preceding year also acknowledged that they had abused their prescribed drug. Further, the same survey reported that 5.2 per cent of adults who had used an opioid pain reliever also had abused their medication.

In November 2016, the Canadian Centre on Substance Abuse reported that an average of more than 13 people across the country had to be hospitalized each day because of an opioid poisoning, either accidental or intentional. The study further found that the rate of hospitalizations due to an opioid poisoning between 2007/08 and 2014/15 had increased by more than 30 per cent.⁴

<table>
<thead>
<tr>
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(Source: Canadian Institute for Health Information, National Health Expenditure Trends, 1975 to 2016)
The rate of opioid poisoning hospitalizations is greatest for Canadians age 65 years and older. Whereas the national average is 14 people hospitalized per 100,000 population, the comparable number for seniors, the majority of whom suffer from accidental poisonings, is 20 per 100,000.

Seniors are more likely than other Canadians to experience polypharmacy – the concurrent use of multiple medications. Two out of three seniors on a public pharmaceutical program in 2012 regularly used five or more drugs, and over one-quarter were taking 10 or more prescribed drugs.\(^5\)

Drugs are costly for both governments and individuals. In BC in 2016, it is estimated that total expenditure on Drugs was $3.8 billion.

Of that latter amount (71.5 per cent or $2.7 billion) was spent by the private sector, primarily individuals, and 31.6 per cent ($1.2 billion) was incurred by the public sector. Most public sector outlays on Drugs in BC were through the province’s PharmaCare program.

British Columbia’s opioid crisis has drawn considerable attention to the issue of drug use and misuse, as well as to non-pharmaceutical adjuncts for medical treatment.
Total Spending on Drugs in British Columbia

British Columbia’s total health spending in 2016 has been estimated at $29.5 billion. Of that amount, the public sector contributed approximately 70 per cent, or $20.6 billion, and the private sector contributed the remaining 30 per cent, or $8.9 billion.

The province’s total spending on drugs in 2016 was pegged at just over $3.8 billion. In this category of healthcare expenditure, the respective composition of public sector and private sector outlays was reversed.

While the former contributed slightly less than $1.2 billion (about 30.3 per cent of the total) the private sector allocation added up to nearly $2.7 billion, or 69.7 per cent of all spending on drugs. Looked at another way, drugs represented 5.6 per cent of total public sector healthcare spending, but 30.1 per cent of health outlays by the private sector.

Expenditures on drugs are growing at a much faster rate than BC’s economy, as measured by nominal GDP. From 1991 to 2015, the provincial economy expanded by 198.4 per cent, while spending on drugs rose by 348.7 per cent.

Average annual growth of drugs outlays over the last two and a half decades was 14.5 per cent, compared to 8.3 per cent for the province’s GDP.

Private spending on drugs between 1991 and 2015 also rose at a much faster rate compared to that of public spending. The former increased by a total of 426.2 per cent – an average of 17.8 per cent annually – while the latter grew by 284.6 per cent, or a yearly average of 11.9 per cent.

TABLE 06
Total Health Expenditure, by Use of Funds, British Columbia, 1975 to 2016

(Source: Canadian Institute for Health Information, National Health Expenditure Trends, 1975 to 2016)
Provincial Government Spending on Drugs

The provincial government does nearly all of the public sector spending on drugs in BC, and most of that expenditure is through PharmaCare.

In 2016 it was estimated that total public outlays for drugs added up to $1.16 billion, of which $1.04 billion – all but $118.5 million – was derived from the province.

PharmaCare was founded by the provincial government in 1973, and is responsible for providing financial assistance to residents for eligible prescription drugs and certain medical supplies. Between 2001/02 and 2015/16, annual PharmaCare expenditures increased from $717 million to more than $1.3 billion.

In 1996, PharmaCare introduced PharmaNet, a secure computer network which links community and hospital emergency departments to a central database, as a central prescription data tracking system. Three years later the system also began to track dispensing data from hospital emergency departments. All prescriptions dispensed in BC are recorded on PharmaNet.

Seniors and Polypharmacy

The term polypharmacy refers to the simultaneous use of multiple medications, and it applies to a large number of Canadians who are age 65 years and older.

In 2012, 65.9 per cent (nearly two of every three) of surveyed seniors who were on a public drug program were taking five or more drugs from different drug classes, and 27.2 per cent were on 10 or more drugs. A sizeable 8.6 per cent of those surveyed had claims for 15 or more prescription drugs.¹
Polypharmacy increases with age. In 2012, of seniors who were between the ages of 65 and 74, 20 per cent had prescriptions for 10 or more drug classes, while for those over 85 years the number was 39.3 per cent.

Although seniors account for only about 15 per cent of Canada's population, they are estimated to account for 40 per cent of total expenditures on prescribed drugs and 60 per cent of all public sector drug spending.\(^2\)

In 2012, public outlays on drugs for seniors in nine of Canada's 10 provinces (excluding Quebec) totalled $4.4 billion. That represented 67.9 per cent of the provincial government's total spending on drugs.

Spending rises in tandem with age. A study undertaken in 2011 found that the average senior enrolled in a public drug program used $1,790 of prescription drugs.\(^3\) For individuals between 65 to 74 years the cost was $1,526; for those ages 75 to 84 it was $2,005; and for Canadians 85 and older, $2,249.

The reason seniors usually take more drugs than younger Canadians is because they often have one or more chronic conditions – that is, a disease that is persistent or lasts longer than three months. Examples of chronic conditions include cancer, diabetes, arthritis, asthma or COPD.

Research, however, has found that many seniors, because aging affects their ability to process medications, are vulnerable to the adverse effects from multiple prescription drugs, which results in less than optimal health outcomes.\(^4\)

Seniors suffering from over-medication often must be hospitalized, and one of the biggest health issues for the elderly is falling, sometimes the result of polypharmacy. An increasing number of physicians are recommending "deprescribing" for elderly patients, which means the seniors are coached to either stop or reduce drug use.

**Chronic Pain**

Nearly one in every five adult Canadians (18.9 per cent) suffers from chronic pain, according to a landmark research study undertaken in 2007 and 2008 by Nanos Research.\(^1\) About one-third of respondents described the intensity of their pain as "very severe", and the most common site of chronic pain is the lower back. Arthritis is the most frequently mentioned cause of pain.

Older adults have a greater prevalence of chronic pain, and women have a higher prevalence at older ages than do men. Nearly one in every two respondents with chronic pain have suffered for more than 10 years.

According to one generally agreed upon definition developed by the International Association for the Study of Pain, of Washington, D.C., chronic pain is that which persists beyond the normal tissue healing time of three months.

In recent years, health providers and academics in industrialized nations around the world have generally agreed that there is a high prevalence of chronic pain among resident populations.\(^2\)

That consensus, moreover, has concluded that it "is a multifaceted disorder associated with considerable disability, burden to the patient, the health care system and society overall."\(^3\)

The Nanos results in Canada mirror a much larger survey of 46,394 individuals conducted in 15 European countries in 2006. The study concluded that 19.0 per cent of adults suffered from severe chronic pain.
Two earlier inquiries, both undertaken in Canada – one in 2000 and the other in 2004 – reported similar results. The former found that 29.0 per cent of respondents had endured continuous or intermittent pain that lasted six months or longer, while the latter reported the number at 25.0 per cent.

**Opioids and the Crisis in BC**

Physicians often prescribe opioids, a subcategory of psychoactive pharmaceuticals, to treat patients who suffer from acute or chronic pain. Unfortunately, those drugs can be abused or misused.

A Health Canada study published in 2014 found that 6.3 per cent of adults (15 years of age and older) who in the preceding year had used a psychoactive pharmaceutical also acknowledged that they had abused their prescribed drug.¹

The survey also reported that 5.2 per cent of adults who had used an opioid pain reliever also abused their medication (abuse was defined by Health Canada as taking a prescription drug for a non-medical reason, such as to get high).

On a per capita basis, Canada is the world’s second largest consumer of narcotic drugs, according to a United Nations report published in 2012.²

Specifically, Canada is the world’s largest per capita consumer of hydromorphone, the second largest for oxycodone, third for morphine, fourth for fentanyl, and seventh for methadone.

The abuse and misuse of psychoactive pharmaceuticals, and specifically of prescription opioids, is a phenomenon not exclusive to either BC or Canada. An article in the New England Journal of Medicine in March 2016 declared that two major facts regarding chronic pain and opioid abuse in the United States were now beyond question.³

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**TABLE 08**

Illicit Drug Overdose Deaths by BC Health Authority, 2007 to 2016

(Source: Ministry of Public Safety and Solicitor General, Office of the Chief Coroner, Illicit Drug Overdose Deaths in BC. February 2017)
First, opioid analgesics are widely diverted and improperly used. Second, the widespread use of the drugs has resulted in a national epidemic of opioid overdose deaths and addictions.

The Canadian Centre on Substance Abuse also has reported that the average daily number of people across the country who require hospitalization because of an accidental or intentional opioid poisoning is at least 13. Moreover, the rate of hospitalizations due to opioid poisonings rose by more than 30 per cent between 2007/08 and 2014/15.

Seniors are the most likely people to be hospitalized for accidental drug misuse. Whereas an average of 14 people per 100,000 population require hospitalization due to an opioid poisoning, the proportion for seniors is 20 per 100,000.

Sadly, the abuse or misuse of opioid drugs sometimes has fatal consequences. In British Columbia, illicit drug overdose deaths have soared over the last decade, rising from 202 in 2007, to 922 in 2016. The phenomenon has occurred in every region of the province. In 2016, the number of fatal drug overdoses ranged from 49 in the Northern Health Authority, to 310 in the Fraser Health region.

Yet a closer examination reveals that the proportion, and increase, of illicit drug deaths per population has been fairly constant across British Columbia. The rate of deaths per 100,000 in 2016 ranges from 8.1 in the Vancouver Island Health Authority, to 11.9 in Fraser Health.

**Physio Can Help**

Highly trained physiotherapists have the requisite skills to design and administer treatment plans for patients who suffer from physical and chronic pain, especially those with musculoskeletal conditions such as lower back pain.
Physiotherapy includes a variety of exercise, massage and stimulation techniques intended to encourage a patient to maintain or improve physical functioning.

Physiotherapists teach patients methods to reduce the severity of pain through appropriate body mechanics and exercise, with the aim of enhancing the mobility of joints and strengthen weakened muscles. Physiotherapists also advise patients on exercise, posture and back care.

Importantly, physiotherapists are proven key members of an effective multidisciplinary Primary Care team, providing professional healthcare insight and advice.

By providing treatment to relieve patients and seniors of pain, without the use of opioids or other pharmaceuticals, physiotherapy also works to reduce the overall cost of healthcare by lowering public and private expenditures on drugs.

**Conclusion**

Physiotherapy is a cost-effective and reliable adjunct in the treatment of pain. As British Columbians search to find answers to the province’s drug opioid crisis, *Physio Can Help.*

**Recommendations**

- The Province of British Columbia should consider how to utilize physiotherapists as integral members of multidisciplinary teams delivering Primary Care in British Columbia.
- BC’s regional Health Authorities should examine ways to utilize physiotherapy and physiotherapists in the healthcare and treatment of patients who suffer from chronic or acute pain.
- Policy makers and healthcare administrators should give thought to how physiotherapy might provide non-pharmacological treatment and exercise to alleviate the chronic pain experienced by seniors.

**Notes**

**EXECUTIVE SUMMARY**

2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. BC Economic and Financial Reviews, various years.
12. Province of British Columbia, Ministry of Health news release. Provincial health officer declares public health
INTRODUCTION

1. BC Ministry of Health news release, op cit.
2. BC Office of the Chief Coroner, op. cit.
4. The Canadian Centre on Substance Abuse. Hospitalizations and Emergency Department Visits Due to Opioid Poisoning in Canada. March 2016.

TOTAL DRUG SPENDING IN BC

1. CIHI. National Expenditure Trends, 1975 to 2016. op. cit.

PROVINCIAL GOVERNMENT SPENDING ON DRUGS

1. CIHI. National Expenditure Trends, 1975 to 2016. op. cit.
2. BC Financial and Economic Reviews, various years.

SENIORS AND ‘POLYPHARMACY’

2. Op cit.

CHRONIC PAIN

1. Schopflocher, op cit
2. Ibid.
3. Ibid.

OPIOIDS AND THE CRISIS IN BC

3. Volkow, op cit
4. The Canadian Centre on Substance Abuse, op cit.
5. BC Office of the Chief Coroner, op cit.
Physiotherapy Association of BC

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